

**Central Pacific Transcontinental Railroad, Tunnel 4
Southern Pacific Donner Pass Route Tunnels
Milepost 180.95
Cisco
Placer County
California**

HAER No. CA-214

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

**Historic American Engineering Record
National Park Service
Western Region
Department of the Interior
San Francisco, CA 94107**

HISTORIC AMERICAN ENGINEERING RECORD

CENTRAL PACIFIC TRANSCONTINENTAL RAILROAD, TUNNEL 4

HAER No. CA-214

Location: Southern Pacific Donner Pass Route Tunnels
Milepost 180.95 at Cisco, Placer County, California.

UTM: 10-712605-4352990
Quad: Cisco Grove, Calif. 7.5', 1955 (photorevised 1979)
(west portal)

UTM: 10-712665-4352990
Quad: Cisco Grove, Calif. 7.5', 1955 (photorevised 1979)
(east portal)

Date of Construction: 1868, 1921, 1942.

Engineer: Theodore Judah and Central Pacific Railroad Engineering
Department (1868); Southern Pacific Railroad Engineering
Department (1921, 1942).

Present Owner: Union Pacific Railroad, 1416 Dodge Street, Omaha NE 68101.

Present Use: Railroad Tunnel.

Significance: The Central Pacific First Transcontinental Railroad is a segment of the western half of the first transcontinental railroad, built from Sacramento, California to Promontory Summit, Utah between 1863 and 1869, where it joined the Union Pacific Railroad which had built west from Omaha. For the purpose of the current project, the first transcontinental railroad was found likely to be eligible for the National Register of Historic Places at the national level of significance under Criterion A for its significance in transportation history, in uniting the East and the West, and in the development of the West. The railroad's period of significance is 1869 to 1945, from the line's completion in 1869, through the years of its role in the settlement and development of the West, to the conclusion of the railroad's achievements in World War II. Tunnel 4 is a contributive element of this historic property.

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I. DESCRIPTION

Tunnel 4 is a 160-foot, single track railroad tunnel bored through a rocky point on the north slope of McIntosh Hill by Central Pacific forces in 1868. The Southern Pacific Railroad slightly enlarged the tunnel in 1921 during the double-track project, and again in 1942 to accommodate larger locomotives and rolling stock; these alterations, however, do not appear to have appreciably changed its appearance from the period of its original construction. The tunnel is on an eight degree right-hand curve, and carries the tracks of the Union Pacific Railroad's (formerly Southern Pacific) Donner Pass line.

II. HISTORICAL INFORMATION

When the Central Pacific built the first transcontinental rail line over the Sierra Nevada in 1863-1869, expediency stemming from time considerations and from the hand labor used to build the line forced a circuitous route that, wherever possible, hugged the outside slopes of hills to maintain reasonable grades in the climb over the mountain rampart. The builders were able to avoid tunneling until they had nearly reached Blue Cañon, more than seventy miles from Sacramento. There they built Tunnel 1 (HAER CA-207), and sequentially numbered the tunnels following to the east as they pushed the tracks toward Promontory Summit and the May 1869 meeting with the Union Pacific. Tunnel 4, located just east of Cisco, is typical of the simple tunnels built by the Central Pacific crews when they had to tunnel: a hard rock bore through a small point, lacking the finished portals that would come with later construction, and with no interior timbering required. Immediately adjacent to Tunnel 39 on the new (1921-25) second track, Tunnel 4 is included in the documentation set for the Central Pacific Transcontinental Railroad (HAER No. CA-196) in order to provide context, as a rare survivor of the initial construction of the pioneer route.

III. SOURCES

Becbe, Lucius. *The Central Pacific & The Southern Pacific Railroads*. Berkeley, CA: Howell-North, 1963.

California Department of Parks and Recreation, Office of Historic Preservation. *California Historical Landmarks*. Sacramento: 1990.

Daggett, Stuart. *Chapters on the History of the Southern Pacific*. New York: Augustus M. Kelley, Publishers, 1966; originally published 1922.

Howard, Robert West. *The Great Iron Trail: The Story of the First Transcontinental Railroad*. New York: G. P. Putnam's Sons, 1962.

Kraus, George. *High Road to Promontory: Building the Central Pacific across the High Sierra*. Palo Alto: American West Publishing Company, 1969.

Sabin, Edwin L. *Building the Pacific Railway*. Philadelphia and London: J. B. Lippincott Company, 1919.

United States Geological Survey. Topographic maps. Cisco Grove, Calif. quadrangle, 7.5' series, 1955 (photorevised 1979).

IV. PROJECT INFORMATION

As a result of the 1996 merger of the Union Pacific and Southern Pacific Railroads, a federal undertaking under the jurisdiction of the Surface Transportation Board of the U.S. Department of Transportation, and in order to accommodate freight trains utilizing longer and taller cars and loads--tri-level auto rack cars and cars carrying double-stacked containers, the Union Pacific will need to increase tunnel clearances on the former Southern Pacific Donner Pass Route. The tunnels, built between 1868 and 1925, are contributing elements of the National Register-eligible Southern Pacific Donner Pass Route Tunnels Historic District. All tunnels have been laser-measured and the railroad will determine clearance needs on a tunnel-by-tunnel basis. Some, because of curved alignment, will require interior work to allow for longer cars such as tri-level auto rack cars; others will require both interior and portal work to provide sufficient vertical clearance for "double-stack" container cars. The latter work may impact the character-defining tunnel portals if crown mining of the tunnels (as opposed to lowering the tunnel floors) is selected. Inasmuch as this would cause an adverse effect to the tunnels, Union Pacific has elected to record the tunnels for the Historic American Engineering Record. Though apparently not requiring alteration, Tunnel 4 is included in the documentation set for the Central Pacific Transcontinental Railroad (HAER No. CA-196) in order to provide context, as a rare survivor of the initial construction of the pioneer route. Documentation was carried out by P.S. Preservation Services, John Snyder Field Director and Historian, and Ed Andersen, Photographer. Photos were made in October 1997, and research was carried out from August 1997 through March 1998.